

t12_calcul_2

(TMYMPC74bKKVQxQa7igA7WCXbUczfceYHt4)

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Let $m1_qc_lang1 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_cqc_lang : \iota \Rightarrow \iota$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k14_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_calcul_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 k5_numbers) \Rightarrow (r1_tarski (k2_calcul_2 X0 X1) (k2_finseq_1 (k2_nat_1 \\ X0 X1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg(X0 \in X1) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 X2)) \wedge (v1_xboole_0 X2)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Leftrightarrow(m1_finseq_1 X1 X0) \quad (5)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (6)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow (k3_finseq_1 X0 = k1_card_1 X0) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow(k2_relset_1 X0 X1 = k10_xtuple_0 X1) \quad (8)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((m1_qc_lang1 X0)\wedge(m1_finseq_1 X1 (k3_cqc_lang X0)))\Rightarrow((v1_finset_1 (k1_card_1 X1))\wedge(v1_card_1 (k1_card_1 X1))) \quad (10)$$

Assume the following.

$$\forall X0.\exists X1.m1_subset_1 X1 X0 \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1))) \quad (12)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (13)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow (m2_subset_1 (k3_finseq_1 X0) k1_numbers k5_numbers) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k5_numbers)\wedge(v7_ordinal1 X1))\Rightarrow(m2_subset_1 (k2_nat_1 X0 X1) k1_numbers k5_numbers) \quad (15)$$

Assume the following.

$$\forall X0.v1_card_1 (k1_card_1 X0) \quad (16)$$

Assume the following.

$$\forall X0.m2_finseq_1 (k14_finseq_1 X0) k5_numbers \quad (17)$$

Assume the following.

$$\begin{aligned} \forall X0.(\exists X1.(v7_ordinal1 X1) \wedge (r1_tarski X0 (k2_finseq_1 \\ X1))) \Rightarrow (\forall X1.(m2_finseq_1 X1 k5_numbers) \Rightarrow ((X1 = k14_finseq_1 \\ X0) \Leftrightarrow ((k10_xtuple_0 X1 = X0) \wedge (\forall X2.(v7_ordinal1 X2) \Rightarrow (\forall X3. \\ (v7_ordinal1 X3) \Rightarrow (\forall X4.(v7_ordinal1 X4) \Rightarrow (\forall X5.(\\ v7_ordinal1 X5) \Rightarrow (\neg(r1_xxreal_0 np_1 X2) \wedge (\neg r1_xxreal_0 X3 X2) \wedge \\ ((r1_xxreal_0 X3 (k3_finseq_1 X1)) \wedge ((X4 = k1_funct_1 X1 X2) \wedge ((\\ X5 = k1_funct_1 X1 X3) \wedge (r1_xxreal_0 X5 X4)))))))))))))) \end{aligned} \quad (18)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (19)$$

Assume the following.

$$\forall X0.((v3_ordinal1 X0) \wedge (v1_finset_1 X0)) \Rightarrow (v7_ordinal1 X0) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0) \Rightarrow (v5_relat_1 X1 X0) \quad (21)$$

Assume the following.

$$\forall X0.(v1_card_1 X0) \Rightarrow (v3_ordinal1 X0) \quad (22)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m2_finseq_1 X1 (k3_cqc_lang \\ X0)) \Rightarrow (\forall X2.(m2_finseq_1 X2 (k3_cqc_lang X0)) \Rightarrow (k2_relset_1 \\ k5_numbers (k14_finseq_1 (k2_calcul_2 (k3_finseq_1 X1) (k3_finseq_1 \\ X2))) = k2_calcul_2 (k3_finseq_1 X1) (k3_finseq_1 X2)))) \end{aligned}$$